Health Care Financing Notes

U.S. Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations

Number 4
December 1985
HCFA Pub. No. 03211

Medicare: Use and cost of short-stay hospital services by beneficiaries with the principal diagnosis of Alzheimer's disease, 1980

by Charles Helbing, Division of Beneficiary Studies, Office of Research

Overview

Alzheimer's disease is a major national health problem in the United States. Approximately 3 to 4 million Americans suffer with some type of senile dementia. There is an estimated 1.5 million who have Alzheimer's disease—the most relentless and devastating of all. Alzheimer's disease is now recognized as the most common cause of severe intellectual impairment in older individuals. The illness has been ranked as the Nation's fourth leading cause of death (Public Health Service, 1983).

Because most patients with Alzheimer's disease must eventually be placed in an institution, the disease puts a tremendous demand on the Nation's health care resources. Alzheimer's disease is a probable contributor to the institutionalization of as many as one half of the more than 1 million elderly in long-term care facilities. Its victims accounted for a large proportion of expenditures for long-term care (Public Health Service, 1983), which amounted to about $27 billion in 1982.

Under the Federal health insurance program, Medicare provides short-term health care services for persons with Alzheimer's disease who are eligible for coverage under the Medicare program and who require acute care services. Medicaid provides short-term and long-term health care services to persons with Alzheimer's disease, but only to those categories of people who are eligible to receive cash payments under one of the existing welfare programs established under the Social Security Act and to those persons identified as "medically needy." Therefore, Federal health benefits are not readily available to the majority of the Alzheimer population for the treatment of this illness. Furthermore, the disease is generally not covered by private health insurance because the treatment involves, for the most part, custodial-type care. As a result, its victims and their families must bear a large share of the financial, emotional, and nursing care burdens associated with the treatment and care of this disease (Keeney, 1983).

The plight of these victims, however, is of grave concern to the Federal Government. Since 1976, Alzheimer's disease has become a major priority for Federal research organizations (e.g., the National Institute on Aging, the National Institute of Neurological and Communicative Disorders and Stroke, and the National Institute of Mental Health) focusing on the prevalence and possible causes of this disorder. Research on Alzheimer's disease was given an additional incentive when the Secretary of the Department of Health and Human Services (DHHS) appropriated $25 million for research in 1984. A special task force has taken the lead in coordinating Alzheimer's disease research at DHHS. The task force will be responsible for translating Alzheimer's disease research "into policy, programs, and practical means for improving the quality of life for older Americans" (Medicine and Health, 1983).

This *Note* presents program data on aged and disabled Medicare beneficiaries who were hospitalized with the principal diagnosis of Alzheimer's disease. In contrast with extensive long-term custodial needs, the data clearly show that hospitalization in an acute care facility for these victims is not a common occurrence under the Medicare health insurance (HI) program.

This is the first time that Medicare program data for beneficiaries with Alzheimer's disease have been analyzed and published in the Health Care Financing Administration statistical report series. The data are classified by the demographic characteristics of the patients, geographic region of residence, and surgical and discharge status. The use of hospital care is measured by the number of discharges (i.e., the number of inpatient stays), the annual discharge rate per 100,000 HI enrollees, the number of days of hospital care, and the average length of hospital stay. The cost of delivering health care services

NOTE: The statistical files are developed and maintained by the Office of Statistics and Data Management in the Bureau of Data Management and Strategy. Programming services for table production were provided by Vikki Latta, Betty Gunn, and Cheryl Black.

to these beneficiaries is measured by total hospital charges, amounts reimbursed under Medicare, mean charges per discharge and per day. These data do not include HI short-stay hospital services rendered to persons with other principal disorders that may be closely related to Alzheimer's disease (e.g., senile dementia disease, etc.).

Highlights

Definitions and symptoms

Alzheimer's disease, as presented in this *Note*, refers to presenile dementia for cases of early onset and senile dementia of the Alzheimer's type for those cases that occur after 65 years of age (The *International Classification of Diseases, Ninth Revision, Clinical Modification* codes for these conditions are 290.1 and 331.0, respectively). The disease is a common neurological disorder that affects the cells of the brain.

The changes most commonly associated with the disease occur in the proteins of the nerve cells in the cerebral cortex—the outer layer of the brain—leading to an accumulation of abnormal tangled fibers called neurofibrillary tangles (Public Health Service, 1981).

Alzheimer's disease is a degenerative and progressive brain disorder. During the early stages of the disease the individual experiences only minor symptoms that are often attributed to emotional disorders or other physical illness. As the disease progresses, memory loss increases and changes in personality and behavior are likely to appear. Judgment, concentration, orientation, writing, reading, and speech may also be affected. In the most severe cases, the disease may render its victims totally incapable of caring for themselves (Public Health Service, 1981).

There are many different patterns in the type, severity, and sequence of changes in mental and neurological functioning that results from Alzheimer's disease. The symptoms are progressive, but there is great variation in the rate of change from person to person. Limitations in physical activity during the later stages of the disease may cause the person to have less resistance to pneumonia and other physical illnesses that may shorten the remaining life expectancy by as much as one-half (Public Health Service, 1981).

Because the diagnosis of Alzheimer's disease is associated with such a dismal prognosis, a great amount of care and investigation must be undertaken before pronouncing it. As of now, the only absolute way of identifying the disease is through an autopsy. As a result, before a diagnosis of the disease is made, other illnesses that may cause senile symptoms must be excluded.

Once you know what the diagnosis is not, you are left with just one probable explanation—Alzheimer's disease (Public Health Service, 1980).

Background and research studies

The disease was first identified in 1906 by Alois Alzheimer, a German neurologist. His patient, a 51-year old woman, suffered loss of memory, disorientation, and later severe dementia and death. Upon death, the patient's brain was found to show severe atrophy and the cerebral cortex was marked by a clumping and distortion of fibers in the nerve cells. Alzheimer called these jumbles of filaments neurofibrillary tangles, and they have since become the hallmark of Alzheimer's disease (Public Health Service, 1981).

For nearly a half century since Alzheimer's day, there was little progress made in the detection and treatment of Alzheimer's disease. The disease, for the most part, was not recognized by physicians and was, consequently, lumped under the general diagnostic classification "senility." Investigations and research, during the past several decades (related to monitoring the flow of blood through the brain) did much to reverse the thinking that assumed senility was an inevitable occurrence in old age that resulted from a hardening of the arteries of the brain. Other studies linked the physical manifestations of senile dementia to those of the neurological disease described by Alzheimer (Public Health Service, 1981).

The development and availability of new and highly sophisticated medical technology, computer technology, and scientific techniques (e.g., the electron microscope, computerized tomography, positron emission tomography, etc.) in the early 1970's provided further impetus and capability for investigating the causes of mental impairment in older persons. During the past decade, research scientists have employed a variety of methods to investigate the possible causes of the disease. These studies have investigated the roles of changes in brain chemistry, trace metals, slow-acting viruses, and the roles of heredity and changes in the aging immune system (Public Health Service, 1983). For example, studies have revealed findings that:

- Its victims have only one-tenth the normal level of an enzyme needed to produce acetylcholine—a chemical that plays a vital role in the transmission of nerve signals, particularly for the memory and learning functions.
- Suggest that a large concentration of aluminum (and other metals) in the brain may cause the disease by acting as a toxin.
- Suggest that disorders may be caused by slow-acting transmissible viruses that affect the central nervous system.
- Suggest that the disease is hereditary and that the genetic makeup of the disease is much more prevalent in the population than ever realized.

Theories are now being formed about the cause that may ultimately contribute to the knowledge needed to halt or even reverse the illness. Although there are a number of promising clues, the determination of the actual cause of Alzheimer's disease requires further intensive scientific investigation. Clinicians are, also, still searching for a more reliable diagnostic test that will detect the disorder in its earliest stages. Alzheimers is a very specific and major disease whose cause must be determined before it can be treated and prevented.

Medicare health insurance program

The Medicare program was enacted on July 30, 1965, as Title XVIII of the Social Security Act. The Medicare legislation established two coordinated health insurance programs for the aged: Part A, or hospital insurance (HI), provides a basic plan affording protection against the costs of hospital and related services; and Part B, or supplementary medical insurance (SMI), provides a voluntary plan covering payment for physicians' services and other related medical and health services.

The original legislation covered nearly all persons 65 years of age or over entitled to HI as social security or railroad retirement beneficiaries. The 1972 Amendments to the Social Security Act (Public Law 92-603) extended Medicare coverage to disabled beneficiaries under 65 years of age who have been entitled to cash benefits for at least 24 months, and to persons under age 65 who require dialysis or a kidney transplant for end-stage renal disease (ESRD). (Public Law 95-292 removed the "under age 65" restriction for persons with ESRD, effective October 1978.)

The HI program covers inpatient services in a participating hospital for up to 90 days in a benefit period. There is no limit to the number of benefit periods a beneficiary may use. The HI program provides a one-time (life-time) reserve of 60 days to use if a beneficiary exhausts the 90 days available in a benefit period.

In addition to inpatient hospital care, the HI program covers up to 100 days in a skilled nursing facility (SNF) if the beneficiary is certified by a physician to require such care and the services are for further treatment of a condition for which the beneficiary was treated in a hospital. The HI program covers home health agency (HHA) services. The services must be provided by institutions and organizations that have been certified as qualified providers of service and must be necessary for the further treatment of a condition for which the patient received services. The Omnibus Reconciliation Act of 1980 (Public Law 96-499) eliminated the 3-day prior hospitalization requirement for HHA services under HI and removed the limit on the number of HHA visits.

Medicare HI short-stay hospital benefits were designed to cover acute, short-term illnesses. Similarly, the Medicare SNF and HHA benefits were designed to provide a lower cost alternative to continued hospital care for an illness. The Medicare program data shown in this *Note*, therefore, represent only those Alzheimer beneficiaries requiring acute care, short-stay hospital services.

Utilization, charges, and reimbursement, 1980

Table 1:

- Medicare beneficiaries discharged from short-stay hospitals with the principal diagnosis of Alzheimer's disease accounted for an estimated 4,460 discharges, or only about .04 percent of all Medicare discharges from short-stay hospitals. This figure indicates that the hospitalization of an Alzheimer victim in an acute care inpatient setting is not a common occurrence under the Medicare HI program.
- The annual discharge rate per 100,000 HI enrollees for Alzheimer stays was only 15.9. For all discharges, the rate was 36,814 per 100,000 HI enrollees.
- These beneficiaries accounted for 57.2 thousand days of short-stay hospital care. The mean length of stay per discharge was 12.8 days, more than 2 days greater than that for all discharges from short-stay hospitals (10.6 days).
- Total hospital charges for Medicare beneficiaries discharged with the principal diagnosis of the disease were an estimated $12.7 million, or only .04 percent of the total charges for all beneficiaries discharged from short-stay hospitals. Of this total, Medicare reimbursed $10.6 million.
- Total charges under the Medicare HI program for all beneficiaries with Alzheimer's disease amounted to $15.3 million. This includes SNF ($.5 million), HHA ($.4 million), and long-stay hospital beneficiaries ($1.7 million) (unpublished HCFA tabulations).
- The mean charges per discharge and per day for inpatient stays were $2,841 and $221, respectively.
- These figures were relatively low (based on the long length of stay) compared to the mean charge per discharge ($3,086) and per day ($292) for all beneficiaries discharged from short-stay hospitals.
- The relatively low mean charge per discharge for the patients reflects lower than average use of ancillary services. Charges for ancillary services rendered to beneficiaries with the disease accounted for 33 percent of the total inpatient short-stay hospital charges (unpublished HCFA tabulations); for all discharges, ancillary charges accounted for 51 percent of the total inpatient short-stay hospital charges (Helbing, 1979).

Utilization and charges, by demographic characteristics, 1980

Table 1:

- The annual discharge rate for disabled beneficiaries (under 65 years of age) discharged from short-stay hospitals with Alzheimer's disease was 16 per 100,000 HI enrollees.
- Disabled inpatients with the principal diagnosis of the disease accounted for only about 475 discharges. Practically all of these patients were between the ages 55 and 64; a few were in their late 40's (unpublished HCFA data).
- The discharge rate for aged beneficiaries 65 years of age or over discharged from short-stay hospitals with Alzheimer's disease varied by age.
- The annual discharge rate per 100,000 HI enrollees increased with advancing age through 79 years (from 12.5 at ages 65-69 to 19.7 at ages 75-79), and then decreased to 18.9 at ages 80-84 and to 16.4 for patients 85 years of age or over.
- The median age for aged beneficiaries with the disease was 74.2 years, nearly 1 year below that for all aged beneficiaries.

- The average length of stay per discharge for Alzheimer beneficiaries generally increased by age group, from 11.6 days for disability patients under 65 years of age to about 13.4 days for patients 80 years of age or over.
- The average charge per discharge for beneficiaries hospitalized with Alzheimer's disease increased (about 20 percent) with age, from $2,588 for those under 65 years of age to $3,102 for those 85 years of age or over (reflecting the increasing length of stay).
- Men with the principal diagnosis of Alzheimer's disease had a higher annual discharge rate per 100,000 HI enrollees than women, 17.3 and 14.9 respectively, a difference of 16 percent.
- This difference was similar to that for all discharges from short-stay hospitals under Medicare.
- The average length of stay per discharge for Alzheimer's disease was slightly higher for women (13.0) than for men (12.6 days).
- The average charge per discharge for women ($2,858) with Alzheimer's disease was slightly higher than that for men ($2,821), reflecting the longer length of stay for women.
- The average charge per day, however, was slightly higher for men ($223) than women ($220), reflecting the longer length of stay for women.
- The incidence of hospitalization under Medicare for Alzheimer's disease was higher for white persons than for all other persons.
- The annual discharge rate per 100,000 HI enrollees was 16.5 for white persons and 11.5 for all other persons, a difference of 43 percent.
- For all discharges from short-stay hospitals under HI, the difference in the discharge rate between race groups was only about one-third of that shown for Alzheimer's discharges.
- The average length of stay per discharge for Alzheimer's disease was higher for all other beneficiaries (14.7 days) than white beneficiaries (12.7 days), a difference of 16 percent.
- The average charges were significantly higher for all other persons hospitalized with Alzheimer's disease.
- All other persons had an average charge per discharge of $3,770, or 37 percent more than that for white persons ($2,755).
- Charges per day were about 18 percent higher for all other persons ($257) than for white persons ($217).

Use and charges by geographic region, 1980

Table 2:

- The rate of hospitalization and the average length of stay per discharge for Alzheimer patients varied substantially by geographic region.
- The annual discharge rate per 100,000 HI enrollees ranged from 13.9 in the Northeast region to 20.0 in the North Central region, a difference of 44 percent.
- The average stay ranged from 8.7 days in the West to 19.5 days in the Northeast, a difference of 124 percent.
- The average charge per discharge for the inpatient hospital treatment of Alzheimer beneficiaries varied considerably by region, from $2,333 in the West to $4,439 in the Northeast.
- The average charge per discharge in the Northeast ($4,439) was nearly twice as high as that for the rest of the country, reflecting their extraordinarily long length of stay (19.5 days).
- The average charge per discharge in the West ($2,333) reflects a combination of a low average length of stay (8.7 days) and a high average charge per day ($270).

Utilization and charges, by surgical status and discharge status, 1980

Table 2:

- The proportion of discharges with the principal diagnosis of Alzheimer's disease who underwent surgery in the hospital was low (8.1 percent) compared to that for all discharges (33 percent).
- Alzheimer patients with surgery had hospital stays (18.6 days) over 50 percent longer than those without surgery (12.3 days).
- As a result of longer stays and a greater utilization of ancillary services (unpublished HCFA tabulations), the average charge per discharge for patients undergoing surgery ($4,816) was 1.8 times greater than for those discharged without surgery ($2,667).
- The proportion of discharges with the principal diagnosis of Alzheimer's disease who were discharged dead from short-stay hospitals during 1980 was relatively low (3.3 percent). It is likely, however, that many victims died in the hospital with a related disorder such as pneumonia.
- The proportion of all short-stay hospital discharges ending with the death of the beneficiary was 5.6 percent.
- The average length of stay for patients who were discharged dead was 19.6 days, or 7 days longer than for those discharged alive (12.6 days).
- The average charge per discharge was 63 percent higher for those beneficiaries who died ($4,535) in the hospital compared to those discharged alive ($2,784).

Technical Notes

Sources and limitations of data

The data shown in this *Note* were derived from the Health Care Financing Administration's (HCFA) short-

stay hospital inpatient stay record file. This file is generated by linking information from three HCFA master program files for a 20-percent sample of Medicare beneficiaries. Whenever a beneficiary in the sample is discharged, the following process takes place to create a statistical stay record for the file.

Selected information is taken from the billing form for inpatient services submitted for payment by participating short-stay hospitals. Data selected from the bill record include the principal diagnosis, surgical status, discharge status, length of hospital stay, charges submitted, and amounts reimbursed.

This bill record is then matched to the Health Insurance Entitlement (HIE) master file which maintains information for each person eligible for HI benefits. Beneficiary characteristics such as age, race, sex, and State of residence are selected from the HIE file and merged with the data describing the beneficiary's period of hospitalization.

All bills submitted for the same hospital stay are merged to create a single stay record. The stay record, thus, consists of one or more bills depending on the length of stay and hospital billing procedures.

The stay record is then matched to the Provider of Services master file, which contains information about the hospital from which the patient was discharged. Data selected include such hospital characteristics as size, type of control (ownership), and State of the provider.

The statistical stay record produced by these steps provides information on the patient, the hospital, and the hospitalization. Accumulation of these records for all beneficiaries in the 20-percent sample results in creation of the inpatient stay record file.

Three types of limitations should be considered when using the data shown in this report: sampling variability, exclusions, and diagnostic coding. The data are based on short-stay hospital stay records for a 20-percent sample of beneficiaries with the principal diagnosis of Alzheimer's disease. Therefore, the data are subject to sampling variability.

Several types of discharges are currently excluded from processing. These represent emergency admissions to short-stay hospitals not participating in the Medicare program, discharges from rehabilitation hospitals, and discharges from distinct parts of long-term care facilities.

The diagnostic information for Alzheimer's disease shown in this *Note* was classified according to the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)*. This represents the second year (1980) that the ICD-9-CM coding system was used in the Medicare statistical system. The data shown represent those stay records for which the principal diagnosis was coded as either 331.0 (Alzheimer's disease) or 290.1 (presenile dementia). The data do not include short-stay hospital services rendered to persons with other principal diagnoses that may be closely associated with Alzheimer's disease (e.g., senile dementia disease, etc.).

Several studies have been conducted over the years to evaluate the reliability of the principal diagnosis as coded and shown in the Medicare Statistical System (MSS). In these studies, the diagnosis on the discharge record in the MSS was compared with the diagnosis abstracted from the hospital medical record. These studies indicate that data pertaining the individual diagnoses should be used with caution.

Definition of terms

Day of care—A day of inpatient hospital care during which services were furnished to a person eligible for hospital insurance benefits. The day of discharge is not counted as a day of care.

Alzheimer's disease—A diagnostic term used to refer to a "hyaline degeneration of the medium and smaller blood vessels of the brain."

Discharge—The formal release of a patient from a hospital. Discharges include persons who died during their hospitalization or were transferred to another hospital.

Annual discharge rate per 100,000 enrollees—The ratio of the total number of discharges (multiplied by 100,000) to the number of persons entitled to benefits on July 1 of that year.

Geographic classification—Based on the address to which the enrollee's social security benefit check is being mailed, or the mailing address recorded in the HIE master file at the time the bill is processed by HCFA, regardless of the reference date of the table.

Benefit period—Begins with the first day of hospitalization and ends when the beneficiary has not been an inpatient in a hospital or skilled nursing facility for 60 consecutive days.

Hospital charges—The hospitals' charge for room and board, and ancillary services recorded on the billing form. The charges reflect the prices placed by the hospital on the specific services furnished to the individual patient. Because Medicare reimbursements are based on the costs of service, charges may not be reimbursed in full.

Short-stay hospitals—Those hospitals where the average total length of stay is less than 30 days. General and special hospitals are included in this category.

Surgery—Includes any operative procedure recorded on the patient's billing form defined as surgery in the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), Volume 3—Procedures*. This includes procedures involving incision, excision, amputation, introduction, endoscopy, repair, distruction, suture, or manipulation.

Principal diagnosis—All diagnostic information shown in these tables are classified according to the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CD)*. Three, four, or five digit codes are assigned for each principal diagnosis.

Reimbursement—Payments under the HI program that are shown in this *Note* are interim reimbursement rates reported on processed bills. The interim rates are established as a per diem amount or as a percentage of total charges. The interim rate established is based on an averaging process designed to keep Medicare current with its accrued obligations for the reasonable costs of services furnished to the aggregate of Medicare patients served by the hospital.

The amounts reimbursed for a particular case may not reflect the actual costs of services furnished to the individual. Figures shown exclude amounts for which the patient is responsible such as deductibles, coinsurance, and charges for noncovered services. The final amount of reimbursement due under Medicare to each provider of medical services is determined after the end of the fiscal year on the basis of the providers' audited reasonable costs of operation.

References

Alzheimer's Disease: Questions and Answers. NIH Pub. No. 81-1646. Department of Health and Human Services, Public Health Service. Washington. U.S. Government Printing Office, Sept. 1981.

Emr, M.: Progress report on senile dementia of the Alzheimer's type. National Institute on Aging. NIH Pub. No. 81-2343. Public Health Service. Sept. 1981.

Helbing, C.: *Medicare: Use and Charges for Accomodation and Ancillary Services in Short-Stay Hospitals*. Unpublished material. Office of Research and Demonstrations, Health Care Financing Administration, 1979.

Keeney, I.G.: Alzheimers disease—Silent epidemic devastates families of victims. *Times Union,* Aug. 21, 1983.

National Institutes of Health: *Alzheimer's Disease: A Scientific Guide for Health Practitioners*. NIH Pub. No. 81-2251. Department of Health and Human Services, Public Health Service. Washington. U.S. Government Printing Office, Nov. 1980.

National Institute on Aging: *Progress report on senile dementia of the Alzheimer's type*. Department of Health and Human Services, Public Health Service. NIH Pub. No. 81-2343. Sept. 1981.

National Institutes of Health: *Progress Report on Senile Dementia of the Alzheimer's Type*. Department of Health and Human Services, Public Health Service. Prepared for the Senate Committee on Appropriations, Feb. 1983.

National Institutes of Health: *Alzheimer's Disease: A Scientific Guide For Health Practitioners*. NIH Pub. No. 81-2251. National Institute of Neurological and Communicative Disorders and Stroke. Bethesda, MD. Nov. 1980.

Washington Report on *Medicine and Health*: Vol. 37, No. 14. Apr. 4, 1983.

Table 1

Use and cost of hospital insurance (HI) services for Medicare beneficiaries discharged from short-stay hospitals with the principal diagnosis of Alzheimer's disease, by age, sex, and race: 1980

Age, sex, and race	Discharges		Total days of care		Total charges			Reimbursement		
	Number	Per 100,000 HI enrollees	Number	Per discharge	Amount in thousands	Per discharge	Per day	Amount in thousands	Per discharge	Per day
Total	4,460	15.9	57,240	12.8	$12,670	$2,841	$221	$10,614	$2,380	$185
Age										
Under 65 years	475	16.0	5,510	11.6	1,229	2,588	223	1,035	2,178	188
65–69 years	1,035	12.5	13,405	12.9	2,876	2,779	215	2,341	2,262	175
70–74 years	1,045	15.9	12,930	12.4	2,937	2,810	227	2,436	2,331	188
75–79 years	930	19.7	12,275	13.2	2,696	2,899	220	2,402	2,583	196
80–84 years	580	18.9	7,895	13.6	1,707	2,944	216	1,438	2,480	182
85 years or over	395	16.4	5,225	13.2	1,225	3,102	235	962	2,436	184
Sex										
Male	2,075	17.3	26,205	12.6	5,853	2,821	223	4,755	2,292	181
Female	2,385	14.9	31,035	13.0	6,817	2,858	220	5,859	2,457	189
Race[1]										
White	4,060	16.5	51,440	12.7	11,186	2,755	217	9,420	2,320	183
All other	305	11.5	4,475	14.7	1,150	3,770	257	911	2,988	204

[1]Excludes unknown race.

Table 2

Use and cost of hospital insurance (HI) services for Medicare beneficiaries discharged from short-stay hospitals with the principal diagnosis of Alzheimer's disease, by selected characteristics: 1980

Characteristics	Discharges		Total days of care		Total charges			Reimbursement		
	Number	Per 100,000 HI enrollees	Number	Per discharge	Amount in thousands	Per discharge	Per day	Amount in thousands	Per discharge	Per day
Total	4,460	15.9	57,240	12.8	$12,670	$2,841	$221	$10,614	$2,380	$185
Geographic region										
Northeast	910	13.9	17,710	19.5	4,040	4,439	228	3,058	3,361	173
North Central	1,450	20.0	15,165	10.5	3,453	2,382	228	3,084	2,127	203
South	1,445	16.0	18,695	12.9	3,649	2,525	195	3,072	2,126	164
West	655	14.2	5,670	8.7	1,528	2,333	270	1,400	2,137	247
Surgical status										
With surgery	360	1.3	6,170	18.6	1,734	4,816	258	1,427	3,964	213
Without surgery	4,100	14.6	50,530	12.3	10,936	2,667	216	9,187	2,241	182
Discharge status										
Alive	4,315	15.4	54,405	12.6	12,012	2,784	221	10,095	2,340	186
Dead	145	0.5	2,835	19.6	658	4,535	232	519	3,581	183

Recent releases

The following Health Care Financing Administration reports are available for sale only from the U.S. Government Printing Office (GPO). Reports must be ordered by title and stock number directly from GPO. Send check or money order for the price listed and make payable to: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Medicare: Selected State Data, 1978-82

This report is published under the Program Statistics series which provides information on Medicare and Medicaid program operation and use. It presents data by State on Medicare enrollment, benefit payments, providers of services, and utilization of services. It contains maps comparing major characteristics of State Medicare data for national 5-year trends as well as highlights for 1982, and a section of detailed statistical information in tabular form by State and census division.
Stock No. 017-060-00156-9
Price: $4.50

Annual Medicare Program Statistics, 1981

This report provides data on the aged and disabled for Medicare enrollment, reimbursement, and utilization and highlights trends in those areas.
Stock No. 017-070-00398-2
Price: $7.00

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Health Care Financing Administration
Office of Research and Demonstrations
6325 Security Blvd.
Baltimore, MD 21207

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF HHS
HHS 392

FIRST CLASS

HCFA Publication No. 03211